



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/788,472

03/01/2004

Karl Weber

Q79527

7541

23373 7590 10/02/2007  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

ZHOU, YONG

ART UNIT

PAPER NUMBER

2609

MAIL DATE

DELIVERY MODE

10/02/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/788,472

Applicant(s)

WEBER, KARL

Examiner

Yong Zhou

Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 7/19/2004.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Oath/Declaration*

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 and 5-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Krause (US Patent Application No. 2002/0064157).

**Regarding claims 1 and 9**, Krause teaches a method and switch router (system and method, Abstract, lines 1-3) for data transmission over a network, comprising:

in a first phase during a transmission cycle, sending solely real-time data telegrams (Fig. 2, first (left) set of blocks #16 for real-time data telegrams immediately following blocks #15) over the network;

in a second phase during the transmission cycle, sending at least one of real-time data telegrams (Fig. 2, last (right) blocks #16 for real-time data telegrams before the non-real-time data section #14) and non-real-time data telegrams (Fig. 2, section 14 for non-real-time data telegrams, and [0034], right col., lines 44-47, wherein the periods of sections 13 and 14 are adjustable giving higher priority to the real-time data telegrams) over the network; and

in a third phase during the transmission cycle, suppressing the transmission of non-real-time data telegrams ([0034], right col., lines 23-24, and Fig. 2, #15, wherein blocks #15 follow the non-real-time section #14 in previous cycle and no non-real-time data is allowed to be sent in blocks #15),

wherein the third phase is followed by a new transmission cycle with a new first phase, during which solely further real-time data telegrams are sent (Fig. 2, # 15, followed by #16 , and [0034], right col., lines 23-26).

**Regarding claims 2 and 10**, Krause further teaches that the network comprises an Ethernet ([0008], lines 2-3).

**Regarding claims 3 and 11**, Krause further teaches that said sending comprises forwarding (p3, left col., line 3) the data telegrams.

**Regarding claim 5**, Krause further teaches that short filler telegrams are sent in the third phase, and transmission of the short filler telegrams is concluded before the new first phase is started (Fig. 2, # 15, followed by #16, and [0034], right col., lines 23-26).

**Regarding claim 6**, Krause further teaches performing a time synchronization of the switching routers ([0012], lines 14-15).

**Regarding claim 7**, Krause further teaches that the time synchronization is performed with a calculation of a delay between two nodes of the network in combination with a synchronization signal ([0012], lines 14-15, and 25-26; it is inherent that the delay between two nodes must also be calculated in order to maintain precise data transfer times).

**Regarding claim 8**, Krause further teaches that the network is designed as a line (it is a common knowledge in the art that the network can be extremely simplified as a line).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krause in view of Decker et al. (US Patent Application No. 2001/0038610).

**Regarding claim 4**, Krause teaches all the limitations of claim 1.

Krause does not specifically teach that the switching router has at least four transmission priorities, although priorities are mentioned, see [0038], lines 30-33.

Decker et al. teach that the switching router has at least four transmission priorities (quality of services classes, [0022], lines 1-5).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Krause invention to include at least four transmission priorities as taught by Decker et al. to achieve predictable results of scheduling transmission of real-time and non-real-time data.

***Conclusion***

Art Unit: 2609

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Arnold et al. (US Patent Application No. 2005/0041690) teach a method for transmitting real-time data messages in a cyclic communication system.

6. Any Response to this Office should be **faxed** to (571) 273-8300 or **mailed to**:

Commissioner for Patents,  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses should be brought to**  
Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Zhou whose telephone number is (571) 270-3451. The examiner can normally be reached on Monday - Friday 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Q. Tieu can be reached on (571) 272-7490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2609

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YZ

  
BENNY Q. TIEU  
SPE/TRAINER